

What is claimed is:

1. A wireless communication device driven by an internal power supply, comprising: disturbance component extracting means for extracting from a signal received by a receiving antenna a disturbance component which may affect the device's wireless communication signal; disturbance wave periodicity detecting means for detecting the radiation period by comparing the disturbance component extracted by said disturbance component extracting means with a frequency-divided signal obtained at a gradually varying frequency dividing ratio with respect to a clock signal of a predetermined frequency; and communication control means for performing the exchange of a communication packet during a radiation-free period of time within the radiation period detected by said disturbance wave periodicity detecting means.

2. The wireless communication device according to claim 1, wherein said disturbance wave periodicity detecting means comprises a frequency dividing circuit for gradually increasing a frequency dividing ratio with respect to an input clock signal of a predetermined frequency and a period determination circuit for determining the period of a disturbance wave by comparing a signal received by a receiving antenna with a frequency-divided signal from said frequency dividing circuit.

3. The wireless communication device according to claim 1 or 2, wherein said communication control means comprises communication connection continuing means for shifting the

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transmission frequency of a control signal to keep the  
communication connection established into a preset  
disturbance-free frequency band to continue the communication  
connection when the radiation period of a disturbance wave  
5 is detected by said disturbance wave periodicity detecting  
means.

4. The wireless communication device according to  
claim 1, wherein said communication control means comprises  
transmission means for notifying of the presence and period  
10 of a disturbance wave any communication partner which cannot  
detect the presence of the disturbance wave when the radiation  
period of a disturbance wave is detected by said disturbance  
wave periodicity detecting means.

5. The wireless communication device according to claim  
15 1, comprising power control means for controlling the power  
depending on the radiation period of the disturbance wave  
detected by said disturbance wave periodicity detecting means.

6. The wireless communication device according to claim  
5, wherein said power control means is configured to determine  
20 whether a communication packet can be transmitted when the  
radiation period of a disturbance wave is detected by said  
disturbance wave periodicity detecting means, and to  
discontinue the power control when the communication packet  
cannot be transmitted.

7. The wireless communication device according to  
25 claim 2, wherein said communication control means comprises  
transmission means for notifying of the presence and period

of a disturbance wave any communication partner which cannot detect the presence of the disturbance wave when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

5           8. The wireless communication device according to claim 3, wherein said communication control means comprises transmission means for notifying of the presence and period of a disturbance wave any communication partner which cannot  
10       detect the presence of the disturbance wave when the radiation period of a disturbance wave is detected by said disturbance wave periodicity detecting means.

          9. The wireless communication device according to claim 2, comprising power control means for controlling the power depending on the radiation period of the disturbance wave  
15       detected by said disturbance wave periodicity detecting means.

          10. The wireless communication device according to claim 3, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting  
20       means.

          11. The wireless communication device according to claim 4, comprising power control means for controlling the power depending on the radiation period of the disturbance wave detected by said disturbance wave periodicity detecting  
25       means.

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